Mr. Greg Tackett
Director of Manufacturing
M & M Machinery, Inc.
5 Commercial Road,
Huntington, IN 46750

Re: Exempt Operation Status,
069-13581-00005

Dear Mr. Greg Tackett:

The application from M & M Machinery, Inc. received on December 07, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the rebuilding and refurbishment plant, to be located at 5 Commercial Road, Huntington, Indiana, is classified as exempt from air pollution permit requirements. The source has the following Permitted Emission Units:

(a) One (1) Paint booth designated PB 1, with dry filters to control particulate matter emissions, painting 0.075 metal parts per hour.
(b) One (1) exhaust stack of height 30 feet and diameter of 2 feet.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-3-2, the PM from the paint booth shall not exceed the pound per hour emission rate established as E in the following formula. Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation :

$E = 4.10\ P^{0.67}$ Where E = rate of emission in pounds per hour
P = process weight rate in tons per hour

(3) Any change or modification which would increase the actual emission of VOC from coating metal to fifteen (15) pounds per day or more in any of these units shall obtain prior approval from IDEM, OAQ and shall be subject to the requirements of 326 IAC 8-2-9. The source shall maintain records of coating usage in order to show compliance with the fifteen pounds of VOC per day

requirement.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

MZK

cc: File - Huntington County
Huntington County Health Department
Air Compliance - Ryan Hillman
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an **Exemption**

Source Name: **M & M Machinery, Inc.**
Source Location: **5 Commercial Road, Huntington, IN 46750**
County: **Huntington**
SIC Code: **7699**
Operation Permit No: **069-13581-00005**
Permit Reviewer: **Mohammad Khan**

The Office of Air Quality (OAQ) has reviewed an application from M & M Machinery Inc. involved with rebuilding and refurbishing used machineries and equipments with painting works.

Permitted Emission Units and Pollution Control Equipment:

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) Paint booth designated PB 1, with dry filters to control particulate matter emissions, painting 0.075 metal parts per hour.

(b) One (1) exhaust stack of height 30 feet and diameter of 2 feet.

Existing Approvals

The source has no existing approvals.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
Paint booth exhaust, PB 1	To allow exhaust	30	2	6,000	Ambient

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 12, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (one page).

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	1.0
SO_2	0.0
VOC	0.6
CO	0.0
NOx	0.0

HAP	Potential to Emit (tons/year)
Various HAPs	Negligible
Total	Negligible

The potential to emit of all criteria pollutants are less than the levels specified in 326 IAC 2-1.1-3 (d) (1). Therefore, an exemption will be issued to the source.

County Attainment Status

The source is located in Huntington County.

Pollutant	Status **(attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)**
PM	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Huntington County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2

and 40 CFR 52.21.

(b) Huntington County has been classified as attainment or unclassifiable for PM, SO2, NOx, and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.0
SO_2	0.0
VOC	0.6
CO	0.0
NOx	0.0
Combination of HAP	Negligible

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is in Huntington County and its potential to emit VOC is less than 100 tons per year. Therefore, rule 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) July 27, 1997.

The operation of the paint booth will emit HAPs less than 10 tons per year for a single HAP and less than 25 tons per year for a combination of HAPs.

326 IAC 6-3-2 (Process Operations)

This painting operation will be subject to the usual OAQ particulate matter determination related to painting. Therefore, the rule equation will be quoted for the particulate matter limitation to be determined for this operation.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

This rule does not apply because the the actual VOC emission are less than 15 pounds per day.

Conclusion

The operation of the rebuilding and machinery refurbishment plant shall be subject to the conditions of the attached proposed Exemption 069-13581-00005.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Rebuilding and refurbishing used machineries
Company Name: M & M Machinery, Inc.
Address City IN Zip: 5 Commercial road, Huntington, IN 46750
CP: 069-13581
Plt ID: 069-00005
Reviewer: Mohammad Khan
Date: Dec18, 2000

Process or Booth I.D	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Gray primer	8.6	39.00%	0.0%	39.0%	0.0%	49.00%	0.50000	0.075	3.35	3.35	0.13	3.02	0.55	0.00	6.84	100%
Clean up solvent	6.6	80.00%	20.0%	60.0%	0.0%	0.00%	0.05000	0.075	3.98	3.98	0.01	0.36	0.07	0.00	ERR	100%

State Potential Emissions **Add worst case coating to all solvents** **0.14** **3.37** **0.62** **0.00**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR 0.3 - <10
Rebuilding and refurbishing used machineries and painting
Company Name: M & M Machinery, Inc.
Address City IN Zip: 5 Commercial road, Huntington, IN 46750
CP: 069-13581
Plt ID: 069-00005
Reviewer: Mohammad Khan
Date: December 18, 2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
18.1	158.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.9	0.9	0.0	7.9	0.4	1.7

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-03-006-03
(SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR 0.3 < 10
Tube heater, Tank heaters and Ovens
HAPs Emissions
Company Name: **M & M Machinery, Inc.**
Address City IN Zip: **5 Commercial road, Huntington, IN 46750**
CP: **069-13581**
Plt ID: **069-00005**
Reviewer: Mohammad Khan
Date: December 18, 2000

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.668E-04	9.529E-05	5.956E-03	1.429E-01	2.700E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.970E-05	8.735E-05	1.112E-04	3.018E-05	1.668E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.